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| APPLICATION NO.          | FILING DATE                      | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |  |  |
|--------------------------|----------------------------------|----------------------|---------------------|------------------|--|--|
| 10/659,464               | 09/09/2003                       | Kung-Li Deng         | 134239              | 4724             |  |  |
| 0,                       | 7590 02/28/200<br>ECTRIC COMPANY |                      | EXAMINER            |                  |  |  |
| GLOBAL RES               | EARCH                            | VARGOT, MATHIEU D    |                     |                  |  |  |
| PATENT DOC<br>NISKAYUNA, | KET RM. BLDG. K1-4<br>NY 12309   | IA59                 | ART UNIT            | . PAPER NUMBER   |  |  |
| Moidi i oivi,            |                                  |                      | 1732                |                  |  |  |
|                          |                                  |                      |                     |                  |  |  |
| SHORTENED STATUTOR       | Y PERIOD OF RESPONSE             | MAIL DATE            | DELIVERY MODE       |                  |  |  |
| 3 MO                     | NTHS                             | 02/28/2007           | PAPER               |                  |  |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 | Application No.                                                                               |                                                                                        | Applicant(s)                                                          |              |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------|--|--|
|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 | 10/659,464                                                                                                      |                                                                                               | DENG ET AL.                                                                            |                                                                       |              |  |  |
| Office Action Summary                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 | Examiner                                                                                      |                                                                                        | Art Unit                                                              |              |  |  |
|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 | Mathieu D. Varg                                                                               |                                                                                        | 1732                                                                  |              |  |  |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address<br>Period for Reply                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| WHIC<br>- Exter<br>after<br>- If NO<br>- Failu<br>Any r                                                                                                                                                                                | ORTENED STATUTORY PERIOD F<br>CHEVER IS LONGER, FROM THE Nations of time may be available under the provisions<br>SIX (6) MONTHS from the mailing date of this come<br>period for reply is specified above, the maximum street to reply within the set or extended period for reply<br>reply received by the Office later than three months<br>and patent term adjustment. See 37 CFR 1.704(b). | MAILING DAT<br>s of 37 CFR 1.136<br>munication.<br>tatutory period will<br>y will, by statute, ca               | TE OF THIS CO<br>i(a). In no event, how<br>I apply and will expire<br>tause the application t | DMMUNICATION<br>ever, may a reply be tim<br>SIX (6) MONTHS from to<br>become ABANDONED | l.<br>ely filed<br>the mailing date of this c<br>O (35 U.S.C. § 133). |              |  |  |
| Status                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        | ٠                                                                     |              |  |  |
| 1)⊠                                                                                                                                                                                                                                    | Responsive to communication(s) file                                                                                                                                                                                                                                                                                                                                                             | ed on 15 Dec                                                                                                    | cember 2006.                                                                                  |                                                                                        |                                                                       |              |  |  |
| • -                                                                                                                                                                                                                                    | This action is <b>FINAL</b> . 2b) This action is non-final.                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| 3)□                                                                                                                                                                                                                                    | Since this application is in condition                                                                                                                                                                                                                                                                                                                                                          | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.                                                                                                                                                                                                                                                                                                       |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| Dispositi                                                                                                                                                                                                                              | on of Claims                                                                                                                                                                                                                                                                                                                                                                                    | •                                                                                                               |                                                                                               |                                                                                        |                                                                       |              |  |  |
| 4) 🛛                                                                                                                                                                                                                                   | Claim(s) 2-21 and 23 is/are pending                                                                                                                                                                                                                                                                                                                                                             | in the applic                                                                                                   | cation.                                                                                       |                                                                                        |                                                                       |              |  |  |
| •                                                                                                                                                                                                                                      | 4a) Of the above claim(s) is/are withdrawn from consideration.                                                                                                                                                                                                                                                                                                                                  |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | Claim(s) is/are allowed.                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | Claim(s) <u>2-21 and 23</u> is/are rejected                                                                                                                                                                                                                                                                                                                                                     | <b>d</b> .                                                                                                      |                                                                                               | •                                                                                      |                                                                       |              |  |  |
| -                                                                                                                                                                                                                                      | Claim(s) is/are objected to.                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| ·                                                                                                                                                                                                                                      | Claim(s) are subject to restrict                                                                                                                                                                                                                                                                                                                                                                | ction and/or                                                                                                    | election require                                                                              | ment.                                                                                  |                                                                       |              |  |  |
| Applicati                                                                                                                                                                                                                              | on Papers                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| 9)                                                                                                                                                                                                                                     | The specification is objected to by the                                                                                                                                                                                                                                                                                                                                                         | e Examiner                                                                                                      |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | ·                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                 |                                                                                               | ected to by the E                                                                      | xaminer.                                                              |              |  |  |
| 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).                                            |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               | •                                                                                      | • •                                                                   | FR 1.121(d). |  |  |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| Priority u                                                                                                                                                                                                                             | ınder 35 U.S.C. § 119                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| u).                                                                                                                                                                                                                                    | 1. Certified copies of the priority documents have been received.                                                                                                                                                                                                                                                                                                                               |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | 2. Certified copies of the priority documents have been received in Application No                                                                                                                                                                                                                                                                                                              |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | Copies of the certified copies of the priority documents have been received in Application No      Copies of the certified copies of the priority documents have been received in this National Stage.                                                                                                                                                                                          |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | application from the International Bureau (PCT Rule 17.2(a)).                                                                                                                                                                                                                                                                                                                                   |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| * See the attached detailed Office action for a list of the certified copies not received.                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| Attachment                                                                                                                                                                                                                             | • •                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                 | -                                                                                             |                                                                                        |                                                                       |              |  |  |
|                                                                                                                                                                                                                                        | e of References Cited (PTO-892)<br>e of Draftsperson's Patent Drawing Review (F                                                                                                                                                                                                                                                                                                                 | OTO 0491                                                                                                        |                                                                                               | Interview Summary (<br>Paper No(s)/Mail Da                                             |                                                                       |              |  |  |
| 3) Information Disclosure Statement(s) (PTO/SB/08)  5) Notice of Informal Patent Application                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |
| Paper No(s)/Mail Date 6)  Other:                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |                                                                                               |                                                                                        |                                                                       |              |  |  |

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1.The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Suzuki et al in view of the article to Hirose et al entitled "Optical Solder Effects of Self-Written Waveguides in Optical Circuit Devices Coupling" or Suzuki et al in view of the article to Hirose essentially for reasons of record noting the following. Upon reconsideration, Mikami et al has been dropped from the rejection as being cumulative with respect to the other references. Suzuki et al discloses that a suitable photopolymerized material would comprise an epoxy-methacrylic acid ester (ie, an epoxy—see col. 6, lines 27-28), blended or copolymerized (see col. 7, lines 23-24) with binding polymers such as PMMA (penultimate line of column 6) and a fluoromethacrylate (polytrifluoroethylmethacrylate—see col. 7, line 4). Hence, Suzuki et al does indeed disclose a material to be polymerized that is very similar to the instant except that the fluromethacrylate is slightly different. However, one of ordinary skill in the art would have been expected to pick and choose suitable resins and there is no indication that the instant material provides any unexpected benefit as pertaining to the instant process. The article to Hirose et al is applied for reasons of record, applicant essentially not providing any arguments against its application.

2.Applicant's arguments filed December 15, 2006 have been fully considered but they are not persuasive. Applicant has submitted that the instant fluororesin would not

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have been obvious over that taught in Suzuki et al but such is not persuasive of error in the rejection. While there might indeed be physical and chemical differences between the instant fluororesin and that disclosed in Suzuki et al, it has not been shown on record how these differences would have affected the instant process in any meaningful way. In truth, it would appear that applicant has merely selected some starting material that would have been obvious from well known photopolymerizable materials used in the prior art, namely Suzuki et al. Clearly, contrary to applicant's comments, Suzuki et al does envision a copolymer that would contain three moieties as set forth in the instant claims. Taken in combination with the resins disclosed in Suzuki et al, it is submitted that the splitter of Hirose et al renders the instant claims obvious.

3.**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on 571 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot February 26, 2007 Mathieu D. Vargot Primary Examiner Art Unit 1732

M. Verant

2/26/07